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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,546	12/02/2004	Han Leng Paxton Tan	SG 020011	5711
65913	7550	01/07/2009		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER HU, RUI MENG	
			ART UNIT 2618	PAPER NUMBER
			NOTIFICATION DATE 01/07/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

### Office Action Summary

**Application No.**

10/516,546

**Applicant(s)**

TAN, HAN LENG PAXTON

**Examiner**

RuiMeng Hu

**Art Unit**

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Receipt is acknowledged of a request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e) and a submission, filed on 10/23/2008.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

### ***Response to Amendment***

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 1-3** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kennedy et al. (US Patent 5125105)** in view of **Tanaka et al. (US Patent 5870666)** and **Moers (US Patent 6957053)**.

Consider **claim 1**, Kennedy et al. disclose method of auto-tuning a radio FM-receiver (abstract, column 2 line 61-column 3 line 21, column 4 lines 9-27, column 5 lines 14-22, figures 3 and 4) by scanning the receiver frequency band (FM band) unit until a FM signal is received meeting criteria (figure 3) for identifying the signal as being of a predetermined quality (column 4 lines 9-27), particularly coming from a valid FM station; wherein the received FM signal is tested once in each of the criteria 31, 32 and 33, and accepting the received FM signal only if all the criteria 31, 32 and 33 are met (column 4 lines 9-27, column 5 lines 14-22, figures 3 and 4).

However Kennedy et al. fail to disclose wherein immediately after receiving said FM signal meeting said criteria, testing the FM signal a predetermined number of times, and storing information denoting a frequency of the FM signal only if the criteria regarding quality and station are met a majority of the times.

In the same field of endeavor, Tanaka et al. disclose a RF signal quality determination circuit, wherein RSSI of a received RF signal is continuously measured a predetermined M times, and the received signal is qualified in RSSI Estimation stage only if the criterion RSSI is met a majority of the times (column 3 line 63-column 4 line 12, figure 2, the test is repeated M (a predetermined integer) times, passed the test a majority of the times as  $F < 0$ ).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Tanaka et al. into the art of Kennedy et al. as to measure the received FM signal a predetermined M times and accepting the signal only if all the criteria 31, 32 and 33 are met a majority of the times for better assurance. It is obvious that consecutive measurements of the received FM signal is initiated only if once the received FM signal meets all the criteria, in view of Kennedy et al. that the FM receiver stops scanning only when all the criteria are met.

However, Kennedy et al. fail to disclose storing information denoting a frequency of the FM signal. This teaching is well known in the art.

In the same field of endeavor, Moers discloses a method of auto-tuning a radio FM-receiver (abstract) by scanning the receiver frequency band (column 4 lines 23-41) until a FM signal is received meeting criteria (column 4 line 66-column 5 line 5) for identifying the signal as being of a predetermined quality (predetermined threshold level qt), particularly coming from a valid FM station (column 4 lines 23-41), and storing information denoting a frequency of the FM signal (figure 3 step a11, column 4 lines 23-41).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Moers into the art of Kennedy et al. as to store the qualified FM channel for faster tuning in the future.

Consider **claim 2, as applied to claim 1**, Kennedy et al. as modified disclose that the results are read 10 times and the information denoting a frequency of the FM signal is only stored if at least 8 times thereof the criteria are met (In the case of  $M=10$ , passes at least 6 times as  $F \neq -2 < 0$ ; passes at least 8 times as  $F \neq -6 < -4$ , thus replacing  $F < 0$  with  $F < -4$  is a design choice and proper as to increase threshold of confidence level).

Consider **claim 3**, Kennedy et al. disclose an auto tuning device (abstract, column 2 line 61-column 3 line 21, column 4 lines 9-27, column 5 lines 14-22, figures 3 and 4) comprising: means for registering whether or not a FM signal, received in a radio FM receiver (the FM signal is accepted only if all the criteria 31, 32 and 33 are met), meets criteria for identifying the signal as being of a predetermined quality and being within frequency window associated with a valid FM station (column 4 lines 9-27), wherein the received FM signal is tested once in each of the criteria 31, 32 and 33, and accepting the received FM signal only if all the criteria 31, 32 and 33 are met (column 4 lines 9-27, column 5 lines 14-22, figures 3 and 4).

However Kennedy et al. fail to disclose counting means for registering within an interval immediately after receiving said FM signal, a number of times that said FM signal meets the criteria, and means for storing information denoting a frequency of the FM signal only if the criteria are met a majority of the times within said interval.

In the same field of endeavor, Tanaka et al. disclose a RF signal quality determination circuit, wherein RSSI of a received RF signal is continuously measured a predetermined M times, and the received signal is qualified in RSSI Estimation stage

only if the criterion RSSI is met a majority of the times (column 3 line 63-column 4 line 12, figure 2, the test is repeated  $M$  (a predetermined integer) times, passed the test a majority of the times as  $F < 0$ ).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Tanaka et al. into the art of Kennedy et al. as to measure the received FM signal a predetermined  $M$  times and accepting the signal only if all the criteria 31, 32 and 33 are met a majority of the times for better assurance. It is obvious that consecutive measurements of the received FM signal is initiated only if once the received FM signal meets all the criteria, in view of Kennedy et al. that the FM receiver stops scanning only when all the criteria are met.

However, Kennedy et al. fail to disclose storing information denoting a frequency of the FM signal. This teaching is well known in the art.

In the same field of endeavor, Moers discloses a method of auto-tuning a radio FM-receiver (abstract) by scanning the receiver frequency band (column 4 lines 23-41) until a FM signal is received meeting criteria (column 4 line 66-column 5 line 5) for identifying the signal as being of a predetermined quality (predetermined threshold level  $qt$ ), particularly coming from a valid FM station (column 4 lines 23-41), and storing information denoting a frequency of the FM signal (figure 3 step a11, column 4 lines 23-41).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the selection technique taught by Moers

into the art of Kennedy et al. as to store the qualified FM channel for faster tuning in the future.

***Conclusion***

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed**

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**Hand-delivered responses** should be brought to

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Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RuiMeng Hu whose telephone number is 571-270-1105. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should



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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*/RuiMeng Hu/*

R.H./rh

January 2, 2009

*/Edward Urban/*

Supervisory Patent Examiner, Art Unit 2618